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Amendments to the Claims:

A clean version of the entire set of pending claims, including amendments thereto, is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims

1. (Canceled)

2. (Currently Amended) The method of Claim [[1]]5, wherein the image parameter is an image acquisition parameter.

3. (Canceled)

4. (Original) The method of Claim 2, wherein said producing the first image data includes capturing a first image of the object, and wherein said producing the second image data includes capturing a second image of the object.

5. (Currently Amended) ~~The method of Claim 4, wherein said determining further includes~~ A method for providing feedback during an inspection of an object, the method comprising:

        receiving first image data representing the object, the first image data being produced using an image parameter;

        determining an incorrect classification of at least one feature of the object based on the first image data produced as a result of an original setting of the image ~~acquisition~~ parameter,

        calculating ~~the~~ image parameter modification information to correct the incorrect classification and

        modifying the original setting of the image ~~acquisition~~ parameter to a modified setting based on the image parameter modification information; and

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_____ receiving second image data representing the object, the second image data being produced using the modified image parameter.

6. (Currently Amended) The method of Claim [[5]]2, wherein said producing the first image data includes producing first raw image data representing the first image using the original setting of the image acquisition parameter, and wherein said producing the second image data includes producing second raw image data representing the second image using the modified setting of the image acquisition parameter.

7. (Original) The method of Claim 2, wherein the image acquisition parameter is at least one of an illumination parameter, resolution parameter, sensor parameter or image view parameter.

8. (Currently Amended) The method of Claim [[1]]5, wherein the at least oneimage parameter is an image processing parameter.

9. (Canceled)

10. (Currently Amended) The method of Claim [[9]]8, wherein said producing the first image data includes processing raw image data representing an image of the at least one feature of the object using the original setting of the image processing parameter to produce the first image data, and wherein said producing the second image data includes processing the raw image data using the modified setting of the image processing parameter to produce the second image data.

11. (Original) The method of Claim 8, wherein the image processing parameter is at least one of a processing type parameter or a processing complexity parameter.

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12. (Canceled)

13. (Currently Amended) The method of Claim [[12]]15, wherein said determining includes processing the image data to measure the image acquisition parameter modification information.

14. (Canceled)

15. (Currently Amended) The method of Claim 13, wherein said determining the parameter modification information further includes A method for providing feedback during an inspection of an object, the method comprising:

　　　setting at least one image acquisition parameter to capture a first image of the object;

　　　determining an incorrect classification of at least one feature of the object based on first image data representing the first image captured using said setting;

　　　determining the image acquisition parameter modification information to correct the incorrect classification and produce an adequate classification; and from the second image

　　　modifying the image acquisition parameter based on the image acquisition parameter modification information to capture a second image of the object.

16. (Currently Amended) The method of Claim [[12]]15, wherein the image acquisition parameter is at least one of an illumination parameter, resolution parameter, sensor parameter or image view parameter.

17-18. (Canceled)

19. (Currently Amended) The inspection system of Claim [[18]]21, further comprising a sensor disposed in relation to the object to receive illumination projected from the object, to capture a first image of the object, and to produce first

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raw image data representing the first image, wherein said processor includes an image analysis processor operable to process the first raw image data to produce first ~~processed~~ image data.

20. (Canceled)

21. (Currently Amended) ~~The inspection system of Claim 19~~ An inspection system for providing feedback during an inspection of an object, comprising: a processor connected to receive first image data representing the object, the first image data being produced using an image parameter, ~~, wherein the first processed image data is the first image data, and~~ wherein said processor ~~further~~ includes a classification processor ~~connected~~ to receive the ~~processed~~ first image data, to determine an incorrect classification of at least one feature of the object based on the ~~processed~~ first image data as a result of an original setting of the image parameter, to calculate ~~the~~ image parameter modification information to correct the incorrect classification, and to modify the original setting of the image parameter to a modified setting based on the image parameter modification information for use in producing second image data representing the object.

22. (Currently Amended) The inspection system of Claim [[21]]19, wherein said sensor is further configured to capture a second image of the object and produce second raw image data representing the second image using the modified setting of the image parameter.

23. (Currently Amended) The inspection system of Claim [[21]]19, wherein said image analysis processor is further operable to process the first raw image data using the modified setting of the image parameter to produce second processed image data.

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24. (Original) The inspection system of Claim 23, wherein the image parameter is at least one of a processing type parameter or a processing complexity parameter.

25. (Currently Amended) The inspection system of Claim [[18]]21, wherein the image parameter is a sensor parameter associated with said sensor.

26. (Original) The inspection system of Claim 25, wherein the sensor parameter is at least one of an exposure duration of said sensor or a resolution associated with the first raw image

27. (Currently Amended) The inspection system of Claim [[18]]21, wherein the image parameter is a view parameter controlling the positional relationship between said sensor and the object.

28. (Currently Amended) The inspection system of Claim [[18]]21, further comprising:
an illumination source disposed in relation to the object to illuminate the object, the image parameter being an illumination parameter controlling said illumination source.

29. (Original) The inspection system of Claim 28, wherein said illumination source illuminates the object with a beam of X-rays.

30. (Original) The inspection system of Claim 28, wherein said illumination source illuminates the object with light.

31. (New) The method of claim 7, wherein the image acquisition parameter is an illumination parameter, and wherein the illumination parameter is an intensity of an illumination source employed for illuminating the object.

32. (New) The method of claim 7, wherein the image acquisition parameter is an X-ray to which the object is exposed.

33. (New) The method of claim 7, wherein the image acquisition parameter is a sensor parameter, and wherein the sensor parameter is one of a resolution of the sensor and a dynamic range of the sensor.

34. (New) The method of claim 16, wherein the image acquisition parameter is an illumination parameter, and wherein the illumination parameter is an intensity of an illumination source employed for illuminating the object.

35. (New) The method of claim 16, wherein the image acquisition parameter is an X-ray to which the object is exposed.

36. (New) The method of claim 16, wherein the image acquisition parameter is a sensor parameter, and wherein the sensor parameter is one of a resolution of the sensor and a dynamic range of the sensor.

37. (New) The inspection system of claim 25, wherein the sensor parameter is one of a resolution of the sensor and a dynamic range of the sensor.

38. (New) The inspection system of claim 21, wherein the image parameter is an intensity of an illumination source employed for illuminating the object.